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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/588,072	06/05/2000	Ahmed Saifuddin	QCPA000320	8110

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Qualcomm Incorporated  
Patents Department  
5775 Morehouse Drive  
San Diego, CA 92121-1714

EXAMINER

TORRES, JOSEPH D

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 02/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/588,072

Applicant(s)

SAIFUDDIN ET AL.

Examiner

Joseph D. Torres

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on January 28, 2002 of Paper No. 8 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

2. The corrected or substitute drawings were received on January 28, 2002 of Paper No. 9. These drawings are accepted.

### ***Response to Amendment***

3. Applicant's arguments with respect to previously claims 1-3, 5 and 6, and amended examined claims 4, 7 and 8 filed January 28, 2002 have been fully considered but they are not persuasive.

4. The Applicant contends, "First of all, Applicants respectfully point out that an outer code as disclosed and defined in Wright is not an outer quality metric as claimed in the above-recited claim 1. An outer code, as described in Wright, is used to refer to a specific coding scheme such as block code (Wright, Col. 3, lines 23-37). In contrast, a quality metric as described and claimed in the present invention may be a parity bit, a

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cyclic redundancy check (CRC), **or any other quality metric known to one skilled in the art** [Emphasis Added]. The Examiner would like to point out that on page 2, lines 27-29, the Applicant defines quality metric in the following fashion: "In order to ascertain integrity of information in the extracted signal, the information bits in the frame are protected by a quality metric derived from the information bits. Such a quality metric may be a parity 30 bit, a cyclic redundancy check (CRC), **or any other quality metric known to one skilled in the art**" [Emphasis Added]. The Examiner asserts that the outer code in Wright is a code is derived from the information bits to protect the information bits in order to ascertain integrity of information in the extracted signal (see col. 1, lines 13-24, Wright) since the outer code in Wright is a forward error correction code and the primary function of a forward error correction code is to protect information bits from which they are derived in order to ascertain integrity of information in the extracted signal, hence by the Applicant's own definition and usage of the term "quality metric", the outer code in Wright is a quality metric. The Applicant's argument is tantamount to saying: an apple is not a fruit because a fruit can be a plum, an orange or any other fruit known to those skilled in the art. The Examiner asserts that an apple is still a fruit and the outer code in Wright is **still** an outer quality metric according to the Applicant's own definition and usage of the term.

5. The Applicant contends, "Applicants respectfully submit that an inner code as disclosed in Wright is not an inner quality metric as claimed in claim 1. **An inner code, as described in Wright, refers to a particular coding scheme such as**

**convolutional code** (Wright, Col. 3, lines 23-26). In contrast, an inner quality metric as described and claimed in the present invention may be a parity bit, a CRC, or any other quality metric known to one skilled in the art. For example, an inner quality metric may be a CRC determined in accordance with a group of information bits that is used to perform integrity check for that group of information bits. Therefore, it is clear that an inner code as disclosed in Wright is very different and highly distinguishable from an inner quality metric as claimed in the above-recited claim 1". The Examiner would like to point out that on page 2, lines 27-29, the Applicant defines quality metric in the following fashion: "In order to ascertain integrity of information in the extracted signal, the information bits in the frame are protected by a quality metric derived from the information bits. Such a quality metric may be a parity 30 bit, a cyclic redundancy check (CRC), **or any other quality metric known to one skilled in the art**" [Emphasis Added]. The Examiner asserts that one of ordinary skill in the art at the time the invention was made would have known that convolutional codes are derived from information bits to protect the information bits in order to ascertain integrity of information in the extracted signal since convolutional codes are forward error correction codes and the primary function of a forward error correction code is to protect information bits from which they are derived in order to ascertain integrity of information in the extracted signal, hence by the Applicant's own definition and usage of the term "quality metric", the inner code in Wright is a quality metric. The Applicant's argument is tantamount to saying: an apple is not a fruit because a fruit can be a plum' an orange or any other fruit known to those skilled in the art. The Examiner asserts that an apple is

still a fruit and the inner code in Wright is still an inner quality metric according to the Applicant's own definition and usage of the term.

6. The Applicant contends, "The decoding of C1 codewords and C2 codewords as described by Inoue is very different and highly distinguishable from the method claimed in claim 3 of the present invention because the C1 and C2 decoding process as disclosed in Inoue does not show or suggest any partial recovery of a frame (e.g., recovery of a group of information bits in the frame) based on quality metric information that corresponds to that particular group of information bits in the frame". First of all, in the Abstract of Inoue, Inoue states that the C1 and C2 codewords are error correction codewords for use in recovering data during the decoding process (col. 1, lines 10-60, Inoue). The Examiner would like to point out that on page 2, lines 27-29, the Applicant defines quality metric in the following fashion: "In order to ascertain integrity of information in the extracted signal, the information bits in the frame are protected by a quality metric derived from the information bits. Such a quality metric may be a parity 30 bit, a cyclic redundancy check (CRC), **or any other quality metric known to one skilled in the art**" [Emphasis Added]. The Examiner asserts that one of ordinary skill in the art at the time the invention was made would have known that forward error correction codes are derived from information bits to protect the information bits in order to ascertain integrity of information in the extracted signal (col. 1, lines 10-60, Inoue), hence by the Applicant's own definition and usage of the term "quality metric", the C1 and C2 codewords in Wright are quality metrics. The Applicant's argument is

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tantamount to saying: an apple is not a fruit because a fruit can be a plum, an orange or any other fruit known to those skilled in the art. The Examiner asserts that an apple is still a fruit and the C1 and C2 codewords in Inoue are still quality metrics according to the Applicant's own definition and usage of the term.

7. The Examiner disagrees with the applicant and maintains all 35 U.S.C. 103(a) rejections of previously claims 1-3, 5 and 6, and amended examined claims 4, 7 and 8. All amendments and arguments by the applicant have been considered. It is the Examiner's conclusion that previously claims 1-3, 5 and 6, and amended examined claims 4, 7 and 8 are not patentably distinct or non-obvious over the prior art of record in view of the references, Inoue, Tohru et al. (US 5712861 A) and Wright, David A. (US 6445702 B1) as applied in the last office action, Paper No. 7. Therefore, the rejection is maintained.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Wright, David A. (US 6445702 B1).

See Paper No. 7 for detailed action of prior rejections.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 3, 4, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue, Tohru et al. (US 5712861 A, hereafter referred to as Inoue) in view of Wright, David A. (US 6445702 B1).

See Paper No. 7 for detailed action of prior rejections.



10. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wright, David A. (US 6445702 B1).

See Paper No. 7 for detailed action of prior rejections.

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

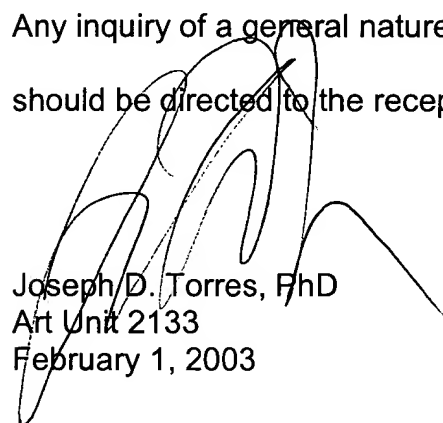
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (703) 308-7066. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (703) 305-9595. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-746-7240.



Joseph D. Torres, PhD  
Art Unit 2133  
February 1, 2003



PHUNG M. CHUNG  
PRIMARY EXAMINER